

REMARKS:

The rejection of the claims in this application is respectfully traversed.

Applicants invention provides a mechanism for picking up a number of cartons as a group. The clamp bars move together to grip the sealed tops of the group of cartons. The clamp bars hold the group of cartons in a single layer and transport them from the transfer point to the packing point.

10 The clamp bars then open. They deposit the entire group of cartons into the box as a single layer in the box. Photographs of Applicants system are enclosed for the Examiner. When they are no longer required they may be disposed of. It is not necessary to return them.

None of this is shown in any of the earlier patents. The earlier patents all show vacuum systems. The vacuum head sucks onto the side of a single bag
It carries the one bag into a box.

None of these systems can carry more than one bag at a time.

None of these systems have clamp bars which clamp onto the sealed tops of several carton at once, in a group.

20 US Patent 5,284,003, Goodman, shows a vacuum system.

Fig 1 shows a vacuum head 402.

Fig 1 also shows a vacuum head 602.

The vacuum heads are the only means for picking up the bags.

There are no clamp bars. The bags are not collected into groups.

The vacuum heads cannot, do not and could not, pick up a group of bags.

'003 is totally different in its mechanics, and its function and its purpose.

The other patents were not relied on by the Examiner. It is hoped that it is not needed to study these in depth.

Claim 1 now refers to clamp bars. There are no clamp bars in '003.

Claim 4 is cancelled. Claim 10 already refers to clamp bars. Claim 16 is changed to refer to clamp bars. The other claims are changed to refer to clamp bars.

There were no other objections made to this application.

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Reconsideration and allowance is earnestly solicited in view of the foregoing. In the event that the Examiner feels that a discussion of the case would be helpful it is respectfully requested that he call the undersigned at the telephone number noted below.

Yours respectfully,

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MARKED UP COPY OF AMENDED CLAIMS

10 1.(amended) Packer apparatus for packing cartons into boxes, and
comprising;
at least one carton transfer location where cartons accumulate to form a carton
group of predetermined size for transfer;
a box packing location adjacent [the] said transfer location for supporting a box
adapted to receive a said carton group in a single layer in said box;
clamp bars moveable towards and way from one another [means] for gripping [the]
said carton group of cartons [in a group] at [the] said transfer location;
[means] a transfer carriage for moving [the] said clamp bars and said gripped
carton group [of cartons] from [the]said transfer location to [the] said box packing
20 location; and;
[means] a carton release mechanism operable to cause said clamp bars to release
said carton group and [for] thereby depositing [the] said carton group [of cartons]
as a single layer in [the] said box at [the] said box packing location.

2. Unamended

Packer apparatus for packing cartons into boxes as claimed in claim 1
wherein there are two said transfer locations, and wherein cartons accumulate at

each said transfer location in a said group.

3. Unamended

Packer apparatus for packing cartons into boxes as claimed in claim 2 wherein said box packing location is positioned between said two carton transfer locations.

4. Cancel Packer apparatus for packing cartons into boxes as claimed in claim 3

10 wherein said gripper means includes at least one gripper assembly, said assembly having pairs of clamp bars operable towards and away from one another for gripping and for releasing said cartons.

5. (amended) Packer apparatus for packing cartons into boxes as claimed in claim 4 wherein said [moving means] transfer carriage includes a gripper support, said support being moveable from one said carton transfer location to said box packing location, and back again, and to said other transfer location, and back again.

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6. (amended) Packer apparatus for packing cartons into boxes as claimed in claim 5 wherein there are two pairs of said clamp bars [gripper assemblies], and wherein said gripper support supports both said [gripper assemblies] pairs of clamp

bars, and wherein movement of said gripper support moves one said [gripper assembly] pair of clamp bars from a said transfer location to said box packing station, while said other [gripper assembly] pair of clamp bars is moved simultaneously [from] from said box packing location to said other of said transfer locations.

10 7. (amended) Packer apparatus for packing cartons into boxes as claimed in claim 6 wherein said [moving means] transfer carriage is operable to procure intermittent start stop operation of said gripper support, thereby causing one said [gripper assembly] pair of clamp bars to dwell [ata] at a said transfer location while the other said [gripper assembly] pair of clamp bars dwells at said packing location.

8. (amended) Packer apparatus for packing cartons into boxes as claimed in claim 7 including a raising and lowering [means] mechanism for respective said [gripper assemblies] pairs of clamp bars operable to raise and lower their respective said [gripper assemblies] pairs of clamp bars, wherein said raising and said lowering take place when said gripper support is stopped.

20 9. (amended) Packer apparatus for packing cartons into boxes as claimed in claim 8 wherein both said [gripper assemblies] pairs of clamp bars are lowered and raised simultaneously.

10. (amended) Carton gripper apparatus for gripping groups of cartons for

packing said groups into boxes, and comprising;

a gripper body member;

a plurality of slide rods supported on said gripper body member;

a plurality of pairs of clamp bars slideable along said slide rods; and,

[means for moving] a movement drive operable to move said pairs of clamp bars towards one another into a gripping position and away from one another into a releasing position.

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11. Unamended Carton gripper apparatus for gripping groups of cartons for packing as claimed in claim 10 and including bearing openings in said clamp bars, and wherein said slide rods extend through respective said bearing openings.

12. Unamended Carton gripper apparatus for gripping groups of cartons for packing as claimed in claim 11 and wherein said clamp bars comprise respective pairs of first and second clamp bars and wherein said first ones of said pairs are secured to first ones of said slide rods, and wherein second ones of said clamp bars are secured to second ones of said slide rods.

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13. Unamended Carton gripper apparatus for gripping groups of cartons for packing as claimed in claim 12 and wherein each of said first clamp bars has slide openings therethrough for receiving said second slide rods therethrough, and wherein each of said second clamp bars has slide openings therethrough for receiving said first slide rods therethrough.

14. Unamended Carton gripper apparatus for gripping groups of cartons for packing as claimed in claim 13 and including a head plate, and two side walls depending downwardly therefrom, slide opening in said side walls for receiving said first and second slide rods therethrough, and power means supported beneath said head plate between said walls..

15. Unamended Carton gripper apparatus for gripping groups of cartons for packing as claimed in claim 14 and including rods extending from said power means, and being connected to said group of said first clamp bars, and being connected to said second group of clamp bars, and being operable to move said first group and said second group simultaneously towards or away from one another. wherein

16. (amended) A method of packing cartons into boxes, and comprising the steps of; accumulating cartons [in groups] at at least one carton transfer location, and assembling a predetermined number of said cartons into a carton group;

moving an open empty box to a box packing location adjacent [the] said transfer location;

gripping [the cartons in a group] said carton group at [the] said transfer location by means of moveable clamp bars;

moving [the] said gripped carton group [of cartons] from [the] said transfer location to [the] said packing location; and;

depositing [the] said carton group [of cartons] in [the] said box at [the] said packing location.

17. (amended) The method of packing cartons into boxes as claimed in claim 16, including accumulating cartons into said carton groups at two said transfer locations, and wherein said box is moved to said packing location positioned between said two carton transfer locations.

18 (amended) The method of packing cartons into boxes as claimed in claim 17 wherein said cartons have sealed seams at their upper ends and including the step of gripping a said group of cartons [by gripper means having] between pairs of clamp bars [and] by moving said clamp bars towards one another for gripping said cartons along respective said carton seams, and away from one another for releasing said cartons.

19 (amended) The method of packing cartons into boxes as claimed in claim 18 including a gripper support, and including the step of moving said support from one said carton transfer location to said box packing location, and back again, and from said box packing station to said other said transfer location and back again and wherein there are two said [gripper assemblies] pairs of clamp bars, and wherein said gripper support supports both said [gripper assemblies] pairs of clamp bars, and wherein the step of moving of said gripper support moves one said [gripper assembly] pair of clamp bars from a said transfer location to said box packing station, while said other [gripper assembly] pair of clamp bars is moved simultaneously from said box packing location to said other of said transfer locations.

20. (amended) The method of packing cartons into boxes as claimed in claim 19 including the step of moving said support means to procure intermittent start stop operation, thereby causing one said [gripper assembly] pair of clamp bars to dwell at a transfer location while the other said [gripper assembly] pair of clamp bars dwells at said packing location.